

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C. 20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 29 August 2000 (29.08.00)	
<b>International application No.</b> PCT/EP99/09614	<b>Applicant's or agent's file reference</b> PG3604/ PCT
<b>International filing date</b> (day/month/year) 08 December 1999 (08.12.99)	<b>Priority date</b> (day/month/year) 22 January 1999 (22.01.99)
<b>Applicant</b> RAND, Paul, Kenneth	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

03 August 2000 (03.08.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland	<b>Authorized officer</b> F. Baechler
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

GLAXOSMITHKLINE  
Corporate Intellectual Property  
Two New Horizons Court  
Brentford  
Middlesex, TW8 9EP  
ROYAUME-UNI

Date of mailing (day/month/year) 06 août 2001 (06.08.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference PG3604/ PCT	
International application No. PCT/EP99/09614	International filing date (day/month/year) 08 décembre 1999 (08.12.99)

1. The following indications appeared on record concerning:		
<input type="checkbox"/> the applicant	<input type="checkbox"/> the inventor	<input checked="" type="checkbox"/> the agent
<input type="checkbox"/> the common representative		
Name and Address PIKE, Christopher, Gerard Pike & Co. Hayes Loft 68A Hayes Place Marlow Buckinghamshire SL7 2BT United Kingdom	State of Nationality	State of Residence
	Telephone No. 01628-471869	
	Facsimile No. 01628-471878	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input checked="" type="checkbox"/> the person	<input type="checkbox"/> the name	<input checked="" type="checkbox"/> the address
<input type="checkbox"/> the nationality		
<input type="checkbox"/> the residence		
Name and Address GLAXOSMITHKLINE Corporate Intellectual Property Two New Horizons Court Brentford Middlesex, TW8 9EP United Kingdom	State of Nationality	State of Residence
	Telephone No. 020 8966 8412	
	Facsimile No. 020 8966 8838	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input type="checkbox"/> the International Preliminary Examining Authority	<input checked="" type="checkbox"/> other: PIKE, Christopher, G.	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  Beate Giffo-Schmitt
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

PIKE, Christopher, Gerard  
Pike & Co.  
Hayes Loft  
68A Hayes Place  
Buckinghamshire SL7 2BT  
ROYAUME-UNI

Date of mailing (day/month/year)

30 August 2001 (30.08.01)

Applicant's or agent's file reference

PG3604/ PCT

## IMPORTANT NOTIFICATION

International application No.

PCT/EP99/09614

International filing date (day/month/year)

08 December 1999 (08.12.99)

## 1. The following indications appeared on record concerning:

☐ the applicant ☐ the inventor ☒ the agent ☐ the common representative

Name and Address

GLAXOSMITHKLINE  
Corporate Intellectual Property  
Two New Horizons Court  
Brentford  
Middlesex, TW8 9EP  
United Kingdom

State of Nationality

State of Residence

Telephone No.

020 8966 8412

Facsimile No.

020 8966 8838

Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

PIKE, Christopher, Gerard  
Pike & Co.  
Hayes Loft  
68A Hayes Place  
Buckinghamshire SL7 2BT  
United Kingdom

State of Nationality

State of Residence

Telephone No.

01628-471869

Facsimile No.

01628-471878

Teleprinter No.

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned  
☐ the International Searching Authority ☒ the elected Offices concerned  
☒ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Marie-José DEVILLARD

Telephone No.: (41-22) 338.83.38

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PTO/PCT Rec'd 20 JUL 2001

**PCT**

To:

PIKE, Christopher G.  
PIKE & CO.  
Hayes Loft  
68A Hayes Place  
Marlow, Buckinghamshire SL7 2BT  
GRANDE BRETAGNE

<b>PIKE &amp; CO.</b>	
RECEIVED	INIT
<b>17 APR 2001</b>	
ACTION DATE	ATTN FILE

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)      12.04.2001

Applicant's or agent's file reference  
PG3604/ PCT

## IMPORTANT NOTIFICATION

International application No.  
PCT/EP99/09614

International filing date (day/month/year)  
08/12/1999

Priority date (day/month/year)  
22/01/1999

Applicant  
GLAXO GROUP LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

 European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized officer

Buckley, D

Tel. +49 89 2399-2082



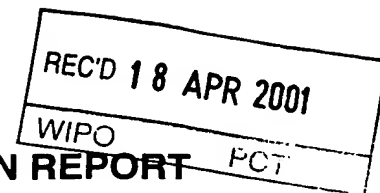
F Express Mail Label  
EL395943178US

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)





Applicant's or agent's file reference <b>PG3604/ PCT</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/EP99/09614</b>	International filing date (day/month/year) <b>08/12/1999</b>	Priority date (day/month/year) <b>22/01/1999</b>
International Patent Classification (IPC) or national classification and IPC <b>A61M15/00</b>		
Applicant <b>GLAXO GROUP LIMITED et al.</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.  
  
☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☐ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  <b>03/08/2000</b>	Date of completion of this report  <b>12.04.2001</b>
Name and mailing address of the international preliminary examining authority:   <b>European Patent Office</b> <b>D-80298 Munich</b> <b>Tel. +49 89 2399 - 0 Tx: 523656 epmu d</b> <b>Fax: +49 89 2399 - 4465</b>	Authorized officer  <b>Ceccarelli, D</b>  <b>Telephone No. +49 89 2399 2653</b> 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP99/09614

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-16 as originally filed

**Claims, No.:**

1-43 as originally filed

**Drawings, sheets:**

1/8-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP99/09614

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

### III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 1-43.

because:

☒ the said international application, or the said claims Nos. 43 relate to the following subject matter which does not require an international preliminary examination (*specify*):  
**see separate sheet**

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1-42 are so unclear that no meaningful opinion could be formed (*specify*):  
**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 43.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

### VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP99/09614

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**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**



**Re Item III**

**Non-establishment of report with regard to novelty, inventive step and industrial applicability**

1. Although claims 1, 19, 20, 21, 26, 33 and 41 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter, i.e. overlapping scope, and to differ from each other only with regard to the definition of the subject-matter for which protection is sought or in respect of the terminology used for the features of that subject-matter.

**The aforementioned claims therefore lack conciseness.**

Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

**Hence, claims 1, 19, 20, 21, 26, 33 and 41 do not meet the requirements of Article 6 PCT.**

2. **No examination according to Article 33(1) PCT has been carried out for claim 43**, as it defines a method for treating the human body (Rule 67.1(iv) PCT). Moreover no meaningful examination could have anyway been carried out for said claim 43, since no Search Report has been established for it (Rule 66.1(e) PCT).

**Re Item VII**

**Certain defects in the international application**

1. The following documents should have been cited in the description since they represent the state of the art in the field of the application (Rule 5.1(a)(ii) PCT):

D1: DE 38 23 535 A (RENTS) 18 January 1990 (1990-01-18)

D2: WO 97 37693 A (ARAUJO DE SOUSA) 16 October 1997 (1997-10-16)

D3: US-A-5 709 202 (LLOYD ET AL.) 20 January 1998 (1998-01-20)

D4: US-A-5 619 984 (HODSON ET AL.) 15 April 1997 (1997-04-15)

2. The claims do not contain any reference signs to the figures as normally prescribed in Rule 6.2(b) PCT.
3. The independent claim is not drafted in the two-part form, as normally required by Rule 6.3(b) PCT.

**Re Item VIII**

**Certain observations on the international application**

The vague and imprecise statement in the description on page 16 lines 1-3 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Paris Cooperation Treaty

PTOPet Rec'd 20 JUL 2001

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) PG3604/ PCT

<b>Box No. I</b>	<b>TITLE OF INVENTION</b>	
	Inhalation device	
<b>Box No. II</b>	<b>APPLICANT</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below). Glaxo Group Limited Glaxo Wellcome House Berkeley Avenue Greenford, Middlesex UB6 0NN GB		<input type="checkbox"/> This person is also inventor. Telephone No. 0171 493 4060 Facsimile No. 0181 966 8838 Teleprinter No. 25456
State (i.e. country) of nationality: GB		State (i.e. country) of residence: GB
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input checked="" type="checkbox"/> all designated States except the United States of America <input type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box		
<b>Box No. III</b>	<b>FURTHER APPLICANTS AND/OR (FURTHER) INVENTORS</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below). RAND, Paul Kenneth Glaxo Group Ltd. Park Road Ware, Herts. SG12 0DP GB		This person is: <input type="checkbox"/> applicant only <input checked="" type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)
State (i.e. country) of nationality: GB		State (i.e. country) of residence: GB
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box		
<input type="checkbox"/> Further applicants and/or (further) inventors are indicated on a continuation sheet.		
<b>Box No. IV</b>	<b>AGENT OR COMMON REPRESENTATIVE: OR ADDRESS FOR CORRESPONDENCE</b>	
The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: <input checked="" type="checkbox"/> agent <input type="checkbox"/> common representative		
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country). PIKE, Christopher Gerard Pike & Co., Hayes Loft, 68A Hayes Place Marlow, Buckinghamshire SL7 2BT, GB		Telephone No.: 01628-471869 Facsimile No.: 01628-471878 Teleprinter No.:
<input type="checkbox"/> Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.		

Form PCT/RO/101 (first sheet) (January 1999)

See Notes to the request form

Express Mail Label  
EL395943178US

**Box No. V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

**Regional Patent**

- ☒ **AP ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and

any other State

which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line).....

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> <b>AL</b> Albania.....                               | <input checked="" type="checkbox"/> <b>LS</b> Lesotho.....                                   |
| <input checked="" type="checkbox"/> <b>AM</b> Armenia.....                               | <input checked="" type="checkbox"/> <b>LT</b> Lithuania.....                                 |
| <input checked="" type="checkbox"/> <b>AT</b> Austria.....                               | <input checked="" type="checkbox"/> <b>LU</b> Luxembourg.....                                |
| <input checked="" type="checkbox"/> <b>AU</b> Australia.....                             | <input checked="" type="checkbox"/> <b>LV</b> Latvia.....                                    |
| <input checked="" type="checkbox"/> <b>AZ</b> Azerbaijan.....                            | <input checked="" type="checkbox"/> <b>MD</b> Republic of Moldova.....                       |
| <input checked="" type="checkbox"/> <b>BA</b> Bosnia and Herzegovina.....                | <input checked="" type="checkbox"/> <b>MG</b> Madagascar.....                                |
| <input checked="" type="checkbox"/> <b>BB</b> Barbados.....                              | <input checked="" type="checkbox"/> <b>MK</b> The former Yugoslav Republic of Macedonia..... |
| <input checked="" type="checkbox"/> <b>BG</b> Bulgaria.....                              |  |
| <input checked="" type="checkbox"/> <b>BR</b> Brazil.....                                | <input checked="" type="checkbox"/> <b>MN</b> Mongolia.....                                  |
| <input checked="" type="checkbox"/> <b>BY</b> Belarus.....                               | <input checked="" type="checkbox"/> <b>MW</b> Malawi.....                                    |
| <input checked="" type="checkbox"/> <b>CA</b> Canada.....                                | <input checked="" type="checkbox"/> <b>MX</b> Mexico.....                                    |
| <input checked="" type="checkbox"/> <b>CH and LI</b> Switzerland and Liechtenstein.....  | <input checked="" type="checkbox"/> <b>NO</b> Norway.....                                    |
| <input checked="" type="checkbox"/> <b>CN</b> China.....                                 | <input checked="" type="checkbox"/> <b>NZ</b> New Zealand.....                               |
| <input checked="" type="checkbox"/> <b>CU</b> Cuba.....                                  | <input checked="" type="checkbox"/> <b>PL</b> Poland.....                                    |
| <input checked="" type="checkbox"/> <b>CZ</b> Czech Republic.....                        | <input checked="" type="checkbox"/> <b>PT</b> Portugal.....                                  |
| <input checked="" type="checkbox"/> <b>DE</b> Germany.....                               | <input checked="" type="checkbox"/> <b>RO</b> Romania.....                                   |
| <input checked="" type="checkbox"/> <b>DK</b> Denmark.....                               | <input checked="" type="checkbox"/> <b>RU</b> Russian Federation.....                        |
| <input checked="" type="checkbox"/> <b>EE</b> Estonia.....                               | <input checked="" type="checkbox"/> <b>SD</b> Sudan.....                                     |
| <input checked="" type="checkbox"/> <b>ES</b> Spain.....                                 | <input checked="" type="checkbox"/> <b>SE</b> Sweden.....                                    |
| <input checked="" type="checkbox"/> <b>FI</b> Finland.....                               | <input checked="" type="checkbox"/> <b>SG</b> Singapore.....                                 |
| <input checked="" type="checkbox"/> <b>GB</b> United Kingdom.....                        | <input checked="" type="checkbox"/> <b>SI</b> Slovenia.....                                  |
| <input checked="" type="checkbox"/> <b>GD</b> Grenada.....                               | <input checked="" type="checkbox"/> <b>SK</b> Slovakia.....                                  |
| <input checked="" type="checkbox"/> <b>GE</b> Georgia.....                               | <input checked="" type="checkbox"/> <b>SL</b> Sierra Leone.....                              |
| <input checked="" type="checkbox"/> <b>GH</b> Ghana.....                                 | <input checked="" type="checkbox"/> <b>TJ</b> Tajikistan.....                                |
| <input checked="" type="checkbox"/> <b>GM</b> Gambia.....                                | <input checked="" type="checkbox"/> <b>TM</b> Turkmenistan.....                              |
| <input checked="" type="checkbox"/> <b>HR</b> Croatia.....                               | <input checked="" type="checkbox"/> <b>TR</b> Turkey.....                                    |
| <input checked="" type="checkbox"/> <b>HU</b> Hungary.....                               | <input checked="" type="checkbox"/> <b>TT</b> Trinidad and Tobago.....                       |
| <input checked="" type="checkbox"/> <b>ID</b> Indonesia.....                             | <input checked="" type="checkbox"/> <b>UA</b> Ukraine.....                                   |
| <input checked="" type="checkbox"/> <b>IL</b> Israel.....                                | <input checked="" type="checkbox"/> <b>UG</b> Uganda.....                                    |
| <input checked="" type="checkbox"/> <b>IN</b> India.....                                 | <input checked="" type="checkbox"/> <b>US</b> United States of America.....                  |
| <input checked="" type="checkbox"/> <b>IS</b> Iceland.....                               |  |
| <input checked="" type="checkbox"/> <b>JP</b> Japan.....                                 | <input checked="" type="checkbox"/> <b>UZ</b> Uzbekistan.....                                |
| <input checked="" type="checkbox"/> <b>KE</b> Kenya.....                                 | <input checked="" type="checkbox"/> <b>VN</b> Viet Nam.....                                  |
| <input checked="" type="checkbox"/> <b>KG</b> Kyrgyzstan.....                            | <input checked="" type="checkbox"/> <b>YU</b> Yugoslavia.....                                |
| <input checked="" type="checkbox"/> <b>KP</b> Democratic People's Republic of Korea..... | <input checked="" type="checkbox"/> <b>ZW</b> Zimbabwe.....                                  |
| <input checked="" type="checkbox"/> <b>KR</b> Republic of Korea.....                     |  |
| <input checked="" type="checkbox"/> <b>KZ</b> Kazakhstan.....                            |  |
| <input checked="" type="checkbox"/> <b>LC</b> Saint Lucia.....                           |  |
| <input checked="" type="checkbox"/> <b>LK</b> Sri Lanka.....                             |  |
| <input checked="" type="checkbox"/> <b>LR</b> Liberia.....                               |  |

Check-boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

- ☒ **AE** United Arab Emirates.....
- ☒ **ZA** South Africa.....
- ☒ **DM** Dominica.....
- ☒ **CR** Costa Rica.....
- ☒ **MA** Morocco.....
- ☒ **TZ** United Republic of Tanzania.....


**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

<b>Box No. VI PRIORITY CLAIM</b>		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box		
		Where earlier application is		
Filing Date of Earlier Application (day/month/year)	Number of earlier application	national application: country	regional application: * regional Office	international application: receiving Office
item (1) (22.01.99) 22 January 1999	9901282.5	GB		
item (2) (16.02.99) 16 February 1999	9903342.5	GB		

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):  
 \* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

<b>Box No. VII INTERNATIONAL SEARCHING AUTHORITY</b>	
Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used): ISA/	Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority): Date (day/month/year)      Number      Country (or regional office)

<b>Box. VIII CHECK LIST; LANGUAGE OF FILING</b>	
This international application contains the following number of sheets: request : 3 description (excluding sequence listing part) : 16 claims : 7 abstract : 1 drawings : 8 sequence listing part of description : Total number of sheets : 35	This international application is accompanied by the item(s) marked below: 1. <input checked="" type="checkbox"/> fee calculation sheet 2. <input checked="" type="checkbox"/> separate signed power of attorney 3. <input checked="" type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input checked="" type="checkbox"/> priority documents (2) identified in Box No. VI as item(s): 2 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input type="checkbox"/> other (specify):
Figure of the drawings which should accompany the abstract: None	Language of filing of the international application: English

<b>Box No. IX SIGNATURE OF APPLICANT OR AGENT</b>	
Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).	
Christopher Gerard Pike Agent for the Applicants	

<b>For receiving Office use only</b>		2. Drawings <input type="checkbox"/> received: <input type="checkbox"/> not received:
1. Date of actual receipt of the purported international application	3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid	
5. International Searching Authority specified by the applicant: ISA/		
<b>For International Bureau use only</b>		
Date of receipt of the record copy by the International Bureau		

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PG3604/ PCT</b>	<b>FOR FURTHER ACTION</b>		see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. <b>PCT/EP 99/ 09614</b>	International filing date (day/month/year) <b>08/12/1999</b>	(Earliest) Priority Date (day/month/year) <b>22/01/1999</b>	
Applicant  <b>GLAXO GROUP LIMITED et al.</b>			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the International search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ Certain claims were found unsearchable (See Box I).

3. ☒ Unity of invention is lacking (see Box II).

**4. With regard to the title,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. The figure of the drawings to be published with the abstract is Figure No.**

☐ as suggested by the applicant.

☒ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1  
☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 99/09614

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 43  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

**1. Claims: 1,2-9,15-18,19,21-25,26-32,40,42**

Medicament cartridge for use in an inhalation device comprising a planar, rigid carrier circular in shape having a plurality of medicament retainers in a spiral path arrangement thereon, and an inhalation device comprising such a medicament cartridge

**2. Claims: 1,10-14,15-18,20,33-39,40-42**

Medicament cartridge for use in an inhalation device comprising an elongate carrier having a plurality of medicament doses thereon and being storable in a flat spiral configuration and extendable as a helix, and an inhalation device comprising such a medicament cartridge



FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1,2-9,15-18,19,21-25,26-32,40,42

Medicament cartridge for use in an inhalation device comprising a planar, rigid carrier circular in shape having a plurality of medicament retainers in a spiral path arrangement thereon, and an inhalation device comprising such a medicament cartridge

2. Claims: 1,10-14,15-18,20,33-39,40-42

Medicament cartridge for use in an inhalation device comprising an elongate carrier having a plurality of medicament doses thereon and being storable in a flat spiral configuration and extendable as a helix, and an inhalation device comprising such a medicament cartridge

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## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP 99/09614

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 709 202 A (LLOYD ET AL.) 20 January 1998 (1998-01-20) column 17, line 32 -column 18, line 60 figures 1,9,10	1,10-13, 15,20
Y	—	33-36, 41,42
Y	US 5 619 984 A (HODSON ET AL.) 15 April 1997 (1997-04-15) column 11, line 20 - line 33 column 11, line 48 - line 67 figures 2,4	33-36, 41,42

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PC 99/09614

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Information on patent family members

International Application No

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International Bureau

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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			(43) International Publication Date: 27 July 2000 (27.07.00)
(21) International Application Number: PCT/EP99/09614		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 8 December 1999 (08.12.99)			
(30) Priority Data: 9901282.5 22 January 1999 (22.01.99) GB 9903342.5 16 February 1999 (16.02.99) GB			
(71) Applicant (for all designated States except US): GLAXO GROUP LIMITED [GB/GB]; Glaxo Wellcome House, Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).			
(72) Inventor; and		Published	
(75) Inventor/Applicant (for US only): RAND, Paul, Kenneth [GB/GB]; Glaxo Group Ltd., Park Road, Ware, Herts. SG12 0DP (GB).		With international search report.	
(74) Agent: PIKE, Christopher, Gerard; Pike & Co., Hayes Loft, 68A Hayes Place, Marlow, Buckinghamshire SL7 2BT (GB).			

(54) Title: INHALATION DEVICE

## (57) Abstract

There is provided a medicament cartridge for use in an inhalation device comprising a carrier having a plurality of medicament retainers in a spiral path arrangement. Typically, the carrier is substantially planar. In one embodiment the carrier comprises an elongate carrier storable in a flat spiral configuration and extendable as a helix. There is also provided an inhalation device comprising a housing having an air inlet, an air outlet, an airway therebetween and a medicament carrier having a plurality of medicament retainers in a spiral path arrangement. A mover is provided for moving the medicament carrier relative to the housing so as to bring successive medicament retainers individually into communication with the airway.

